**SECTION I—CLAIMS**

**Amendment to the Claims:**

This listing of the claims will replace all prior versions and listings of claims in the application. Claims 49, 51, and 55 are amended herein. Claims 1-48, 50, 53, 54, and 59-92 are canceled herein without prejudice. New claims 93-99 are presented herein.

**Listing of Claims:**

1-48. (Canceled).

49. (Currently amended) A method in a Web service provider communicatively interfaced with a plurality of Web service clients, comprising:

obtaining a description of a Web service comprising protocol-independent business logic;

generating the Web service based on the description obtained, the generated Web service comprising the protocol-independent business logic in an executable format;

generating a first virtual interface to the Web service based on the description obtained, the first virtual interface comprising a mapping of the protocol-independent business logic of the Web service to a first transport protocol that provides, wherein the first virtual interface to provide a first Web service client access to the protocol-independent business logic of the Web service, and wherein the first Web service client including comprises a Web service client authentication extension having a client protocol implementation further including a user selected selectable authentication protocol therein for specifying the authentication protocol to be implemented by a Web service client proxy between the virtual interface and the first Web service client; , the client protocol implementation to

~~be set by a graphical user interface having a plurality of icons representing a plurality of authentication protocols, the user selected authentication protocol to be established by an icon in the plurality of icons selected by the user that corresponds to the user selected authentication protocol;~~

receiving and implementing the user specified authentication protocol without regenerating the Web service client proxy, wherein the user specified authentication protocol is received from the first Web service client via a logical port between the first Web service client and the Web service client proxy;

processing message traffic exchanged between the ~~a first~~ Web service client proxy and ~~associated with~~ the first Web service client ~~and the Web service~~ via the first virtual interface in accordance with the first transport protocol and the user specified authentication protocol implemented by the Web service client proxy;

generating a second virtual interface to the Web service based on the description obtained, the second virtual interface comprising a mapping of the protocol-independent business logic of the Web service to a second transport protocol different than the first transport protocol, wherein the second virtual interface to provide a second Web service client access to the protocol-independent business logic of the Web service without regenerating the Web service; and

processing message traffic exchanged between the Web service client proxy and the second Web service client ~~and the Web service~~ via the second virtual interface in accordance with the second transport protocol, and in accordance with a second user selectable authentication protocol received and implemented without regenerating the Web service client proxy.

50. (Canceled).

51. (Currently amended) The method of claim ~~50~~ 49, wherein the ~~message~~ first user selectable

authentication protocol ~~type comprises:~~ requires the use of an X.509 authentication

certificate. ~~authentication type based on an authentication protocol implementation of the~~

~~first Web service client.~~

52. (Previously Presented) The method of claim 49, wherein the first transport protocol is

selected from the group comprising HyperText Transfer Protocol (HTTP), Simple Object

Access Protocol (SOAP), SOAP over HTTP, SOAP over File Transfer Protocol (FTP),

SOAP over Simple Mail Transfer Protocol (SMTP), and HTTP over Secure Socket Layer

(HTTPS); and

wherein the second transport protocol is selected from the group comprising HTTP, SOAP,

SOAP over HTTP, SOAP over FTP, SOAP over SMTP, and HTTPS, wherein the second

transport protocol selected is different from the first transport protocol selected.

53. (Canceled).

54. (Canceled).

55. (Currently amended) The method of claim 49, further comprising:

generating [[a]] the Web service client proxy responsive to a request, the Web service client

proxy comprising the first virtual interface and the second virtual interface, wherein the

Web service client proxy to execute at a Web service proxy server separate from the Web

service provider.

56. (Previously Presented) The method of claim 49, wherein the first transport protocol

comprises an authentication mechanism and a transport guarantee mechanism.

57. (Previously Presented) The method of claim 56, wherein the first transport protocol further

comprises a specified port binding.

58. (Previously Presented) The method of claim 49, wherein obtaining the description of the

Web service comprises:

obtaining a Web Service Definition Language (WSDL) document from a Universal Description,

Discovery, and Integration (UDDI) directory, the UDDI directory comprising a plurality

of WSDL documents, each describing one of a plurality of Web services accessible via

the Web service provider, wherein the WSDL document obtained describes the Web

service comprising the protocol-independent business logic.

59-92 (Canceled).

93. (New) A computer-readable storage medium having instructions stored thereon that, when

executed by a processor in a Web service provider, cause the Web service provider to

execute a method comprising:

obtaining a description of a Web service comprising protocol-independent business logic;

generating the Web service based on the description obtained, the generated Web service

comprising the protocol-independent business logic in an executable format;

generating a first virtual interface to the Web service based on the description obtained, the first

virtual interface comprising a mapping of the protocol-independent business logic of the

Web service to a first transport protocol that provides a first Web service client access to

the protocol-independent business logic of the Web service, and wherein the first Web

service client comprises a Web service client authentication extension having a user

selectable authentication protocol therein for specifying the authentication protocol to be

implemented by a Web service client proxy between the virtual interface and the first

Web service client;

receiving and implementing the user specified authentication protocol without regenerating the

Web service client proxy, wherein the user specified authentication protocol is received

from the first Web service client via a logical port between the first Web service client

and the Web service client proxy;

processing message traffic exchanged between the Web service client proxy and the first Web

service client via the first virtual interface in accordance with the first transport protocol

and the user specified authentication protocol implemented by the Web service client

proxy;

generating a second virtual interface to the Web service based on the description obtained, the

second virtual interface comprising a mapping of the protocol-independent business logic

of the Web service to a second transport protocol different than the first transport

protocol, wherein the second virtual interface to provide a second Web service client

access to the protocol-independent business logic of the Web service without

regenerating the Web service; and

processing message traffic exchanged between the Web service client proxy and the second Web

service client via the second virtual interface in accordance with the second transport

protocol, and in accordance with a second user selectable authentication protocol

received and implemented without regenerating the Web service client proxy.

94. (New) The computer-readable storage medium of claim 93, wherein the authentication

protocol requires the use of an X.509 authentication certificate.

95. (New) The computer-readable storage medium of claim 93, wherein the first transport

protocol is selected from the group comprising HyperText Transfer Protocol (HTTP),

Simple Object Access Protocol (SOAP), SOAP over HTTP, SOAP over File Transfer

Protocol (FTP), SOAP over Simple Mail Transfer Protocol (SMTP), and HTTP over

Secure Socket Layer (HTTPS); and

wherein the second transport protocol is selected from the group comprising HTTP, SOAP,

SOAP over HTTP, SOAP over FTP, SOAP over SMTP, and HTTPS, wherein the second

transport protocol selected is different from the first transport protocol selected.

96. (New) The computer-readable storage medium of claim 93, further comprising:

generating the Web service client proxy responsive to a request, the Web service client proxy

comprising the first virtual interface and the second virtual interface, wherein the Web

service client proxy to execute at a Web service proxy server separate from the Web

service provider.

97. (New) The computer-readable storage medium of claim 93, wherein the first transport

protocol comprises an authentication mechanism and a transport guarantee mechanism.

98. (New) The computer-readable storage medium of claim 97, wherein the first transport

protocol further comprises a specified port binding.

99. (New) The computer-readable storage medium of claim 93, wherein obtaining the description

of the Web service comprises:

obtaining a Web Service Definition Language (WSDL) document from a Universal Description,

Discovery, and Integration (UDDI) directory, the UDDI directory comprising a plurality

of WSDL documents, each describing one of a plurality of Web services accessible via

the Web service provider, wherein the WSDL document obtained describes the Web

service comprising the protocol-independent business logic.